

ABSTRACT

The present invention aims at providing a photodetector which can detect the incident light intensity with a high speed while having a wide dynamic range for incident light intensity detection. Each photodiode $PD_{m,n}$ generates electric charges Q by an amount corresponding to the intensity of light incident thereon. An electric charge amount level determining circuit $10_{m,n}$ is provided so as to correspond to the photodiode $PD_{m,n}$, determines the level of the amount of electric charges Q generated by the photodiode $PD_{m,n}$, and outputs a level signal $Level$ indicative of the result of level determination. The capacitance value of the integral capacitance part 21 in the integrating circuit 20_m is set by the respective level signals $Level$ sequentially fed from N electric charge amount level determining circuits $10_{m,1}$ to $10_{m,N}$. The integrating circuit 20_m accumulates the electric charges Q fed to the input terminal sequentially from the N electric charge amount level determining circuits $10_{m,1}$ to $10_{m,N}$ into the integral capacitance part 21, and outputs a voltage V_{20} corresponding to the amount of thus accumulated electric charges Q from the output terminal.